

First record of *Etrumeus teres* (Clupeidae) in the central Mediterranean Sea

by

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RÉSUMÉ. - Première capture de *Etrumeus teres* (Clupeidae) en Méditerranée centrale.

Il est fait mention ici du premier signalement en Méditerranée centrale de la shadine ronde, *Etrumeus teres* (DeKay, 1842), un migrateur lessepsien. Ses caractéristiques morphométriques et méristiques sont décrites. Ce poisson a été pêché à la senne, à trois miles à l'est de l'île de Lampedusa (détroit de Sicile) en septembre 2005. L'abondance de cette espèce augmente dans le bassin oriental de la Méditerranée et sa précédente capture avait été signalée au large de l'île de Rhodes. Notre capture représente le signalement le plus occidental en Méditerranée.

Key words. - Clupeidae - *Etrumeus teres* - Central Mediterranean - Straits of Sicily - Lessepsian - First record.

On September 2nd, 2005, a specimen of a Lessepsian migrant, *Etrumeus teres* (DeKay, 1842), a species not previously recorded in the central Mediterranean Sea, was caught off Lampedusa Island, Straits of Sicily (35°29'21.0"N-12°39'42.5"E) (Fig. 1). This specimen (Fig. 2) was caught at night by purse seine, at a depth of ca. 65 m, as by-catch of the fishery of mackerel (*Scomber* spp.), together with several specimens of *Sardinella aurita* Valenciennes, 1847.

E. teres is a subtropical clupeid fish usually aggregating in large schools, also shoaling with other pelagic species such as *S. aurita* and *Trachurus lathami* Nichols, 1920, in the Gulf of Mexico (Yilmaz and Hossucu, 2003). It is a zooplanktivorous species, distributed in the western Atlantic (Nova Scotia south to Florida, Gulf of Mexico, Venezuela and the Guianas), eastern Pacific (California to Chile including the Galapagos Islands and Hawaii), western Pacific (Japan and southern Australia), western Indian Ocean (Somalia to South Africa) and Red Sea, with immigrants into the eastern Mediterranean (Whitehead, 1985; Froese and Pauly, 2005). It was recorded for the first time in the Mediterranean as a single specimen in 1963 in Israel (Whitehead, 1963). Successively it has been found in Egypt (El-Sayed, 1994), Iskenderun Bay, Turkey (Basusta *et al.*, 1997), Cyprus (Golani, 2000) and Rhodes Island (Corsini *et al.*, 2005). Since 1997, *E. teres* has been caught in large numbers by purse seine along the south-eastern coast of Turkey, where it currently represents an important commercial fishery resource (Basusta *et al.*, 2002). Its population is gradually increasing in the Gulf of Antalya (south-western Turkey) (Yilmaz and Hossucu, 2003).

So far, four Lessepsian species of Clupeidae have been recorded in the Mediterranean Sea and they are all confined to the eastern Levant Basin (Golani *et al.*, 2002). *E. teres*, *Dussumieria elop-soides* Bleeker, 1849 and *Herklotsichthys punctatus* (Rüppell, 1837) have become common in Israel (Golani, 2000) and have reached the coasts of Turkey where the first two species became also commercially important (Basusta *et al.*, 2002). *Spratelloides*

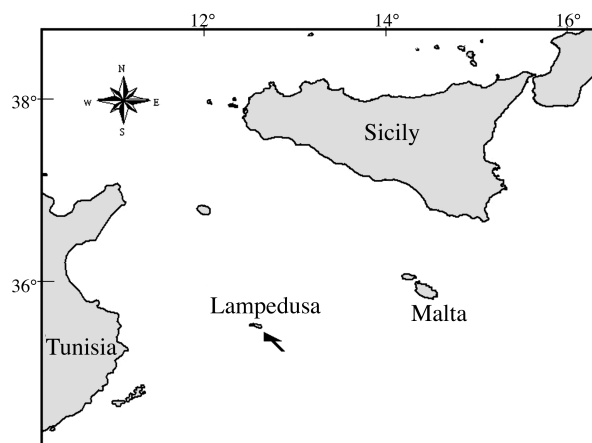


Figure 1. - Map showing capture site of *Etrumeus teres*. [Carte indiquant le lieu de capture d'*Etrumeus teres*.]

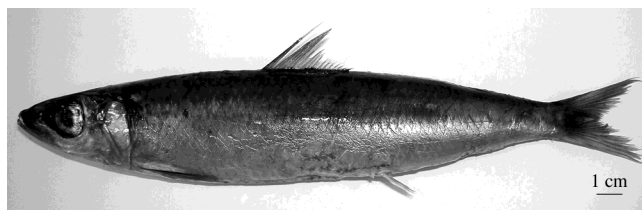


Figure 2. - *Etrumeus teres* caught off Lampedusa Island (Straits of Sicily). [*Etrumeus teres* capturé au large de l'île Lampedusa (détroit de Sicile).]

delicatulus (Bennett, 1832) is only found along the Israel coasts where its population has greatly increased in the last years (Golani *et al.*, 2004). Before the present record, none of the four afore-cited species has been recorded in the central Mediterranean Sea.

The specimen caught in the Straits of Sicily is deposited in the Ichthyological Collection of ICRAM, Palermo (code ET-MF1) and its muscle sample is stored in the ICRAM alien species tissues bank (created in 2000 in the frame of the national project "Identification and distribution of non indigenous species in Italian seas"). At the time of the capture, the fish was dark blue on the back, silver along the flanks, and weighed 112 g. Its morphometric and meristic data are reported in table I and correspond to those reported in the literature for this species (Whitehead, 1985). In the past, *E. teres* has been confused with its congener *E. whiteheadi*, which is distributed in the south-eastern Atlantic, and from which it is distinguished by having fewer lower gill rakers (30 to 35) and less advanced pelvic fins (Whitehead, 1985).

Because of the fortuity of this finding, that occurred during the

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Table I. - Morphometric and meristic characteristics of *Etrumeus teres* from Lampedusa Island (Straits of Sicily). [Données morphométriques et méristiques de *Etrumeus teres* de l'île Lampedusa (déroit de Sicile).]

Morphometrics	mm	% LT
Total length (LT)	231	
Fork length	211	91.3
Standard length	202	87.4
Body depth	35.6	15.4
Predorsal distance	88	38.1
Head length	45	19.5
Eye diameter	12.4	5.4
Preorbital distance	11.4	4.9
Postorbital distance	25.2	10.9
Prepectoral distance	45.2	19.6
Prepelvic distance	122.3	52.9
Preal anal distance	163	70.6
Base of dorsal fin	26.6	11.5
Base of pectoral fin	13.2	5.7
Base of anal fin	9.4	4.1
Base of pelvic fin	4.2	1.8
Pectoral fin	27.4	11.9
Pelvic fin	14.3	6.2
Upper jaw	14.3	6.2
Meristic counts	n	
Dorsal fin rays	18	
Pectoral fin rays	15	
Pelvic fin rays	8	
Anal fin rays	12	
Branchiostegal rays	15	
Gill rakers	14+35	

night and during the storage of thousands of mackerels and round sardinellas, fishermen themselves cannot exclude the possible presence of other specimens of *E. teres* in their catch. Therefore, we are not able to assert whether the specimen caught is a stray individual or not.

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